

# WATERSHED MANAGEMENT

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## Governor Recognizes Local Watershed Efforts

Three innovative, locally led efforts to restore and enhance Montana watersheds were honored July 11 in Helena. Governor Judy Martz presented the third annual Watershed Stewardship Awards to the Blackfoot Challenge/Blackfoot Chapter of Trout Unlimited; Big Spring Watershed Partnership/Fergus County Conservation District; and the Upper Shields Watershed Association.

The Blackfoot Challenge is a grass roots group organized to coordinate efforts that will enhance, conserve and protect the natural resources and rural lifestyle of the Blackfoot River Valley for present and future generations. The group, which has no formal membership, is comprised of numerous private landowners, federal and state agency representatives, local government officials and several corporate landowners. The Challenge supports environmentally responsible resource stewardship through the cooperation of public and private interests. Some of the Blackfoot Challenge's accomplishments include:

- ◆ Removing barriers to over 300 miles of fish passage.
- ◆ Restoring 32 miles of stream habitat, 51 miles of riparian habitat, 2100 acres of wetlands and 2300 acres of native grasslands.
- ◆ Obtaining perpetual conservation easements on 54,500 acres.
- ◆ Installing 13 self-cleaning fish screens on irrigation ditches.



*Upper Shields Bank Stabilization Project*

The Big Blackfoot Chapter of Trout Unlimited is one of the partners in the Blackfoot Challenge. The chapter developed a Cooperative Agreement with the U.S. Fish and Wildlife Service through the Partners for Fish and Wildlife Program to work on restoration of the Blackfoot's fishery. The Chapter's first project was a two year inventory and status report of fisheries in the Blackfoot River watershed (completed in 1989). This effort focused on surveying mainstem trout populations, sampling juvenile trout populations in tributaries, and establishing monitoring sites in 19 tributaries. From 1990 to 1998, additional fishery inventories were completed in 33 tributaries to the Blackfoot River. These assessments identified significant degradation in 43 of the 52 tributaries. Habitat degradation on private lands was identified as a the primary factor impacting the fishery. Populations of trout in all sampled reaches of the Blackfoot River were below expected levels; numbers of native

bull trout and westslope cutthroat trout were alarmingly low. Because of these findings, the legal harvest of bull trout and cutthroat trout was restricted to catch-and-release regulations in March of 1990. In 1990 tributary streams were prioritized for restoration based on their importance to native trout and potential contributions to the mainstem of the Blackfoot River. On-the-ground restoration projects began in 1990 focusing on correcting obvious fishery impacts. The five main tools used for restoration were: instream habitat restoration, improving stream flows, addressing fish passage problems, irrigation ditch screening, and riparian grazing management. All projects were accomplished through "cooperative solutions" between private landowners and the restoration team composed of biologists, hydrologists, and range conservationists.

The success of the Big Spring Watershed Partnership is due in large part to the efforts of 47 landowners along Big Spring, East Fork of Big Spring, Casino, Big Casino, Hanson, Castle, Beaver, Cottonwood and Pike creeks. The partnership has completed phase two of a water quality restoration project. The three major project accomplishments are:

**Improved Upland and Riparian Management.** Twenty-one landowners improved riparian vegetation by implementing grazing management plans and installing 15 miles of riparian and cross fencing. Twenty landowners developed 34 off-stream water sources for livestock. Twenty-nine landowners restored eroding banks on about 7,000 feet of stream. Forty-seven landowners protected 23,840 upland acres by implementing resource management plans.

**Information and Education.** Lewistown area residents were informed of the progress of the project through tours and displays, outdoor classrooms and workshops, a Brewery Flats video, and a 28-page watershed book. The students at Lewistown Junior High are actively involved in resource inventory and ongoing water quality monitoring.

**Spin-off Projects.** The success of the Big Spring project encouraged the formation of other watershed groups on Flatwillow, Warm Springs, and Two Calf creeks. In addition, the school children prompted an investigation looking for the source of PCB contamination in the large fish in Big Spring Creek.

Fergus County Conservation District took an active role in organizing the partnership and serves as the fiscal and administrative agent for the group. Other cooperating agencies include

the Natural Resource Conservation Service, Fergus County Commission, Lewistown City Council, Montana Department of Transportation, and Montana Department of Fish, Wildlife and Parks. The project was partially funded by the Department of Environmental Quality's 319 Grant Program. The grant money was matched by financial and in-kind contributions from participating landowners and cooperating agencies.

The Upper Shields Watershed Association was organized in 1997. The association identified streambank instability, water quality, weeds, irrigation efficiencies, dewatering and endangered/threatened species as major resource concerns. The new group soon developed and began to implement a Watershed Management Plan. Three off-stream livestock watering systems have been completed, reducing the impact of 900 cattle. Four more systems are scheduled to be completed this summer. Two bank stabilization projects are also in progress.

The association completed a weed map and has sprayed several hundred acres for Spotted Knapweed and Leafy Spurge.



*Knapweed*



*Leafy Spurge*

NRCS and DNRC are helping the group evaluate irrigation system efficiencies. One of the goals of the group is to assure adequate water for both irrigation and fish. The association sponsored irrigation water management workshops in 2000 and 2001.

The Upper Shields Watershed Association is governed by an executive committee comprised of the chairman, vice-chairman, coordinator, assistant coordinator and the chairs of the various committees. The association formed a technical advisory committee comprised of representatives of Park Conservation District, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Montana Department of Fish, Wildlife and Parks, Department of Natural Resources and Conservation, Montana State University, U.S. Forest Service and Park County Cooperative Extension Service.

Four criteria are used to evaluate nominations for the Watershed Stewardship Award: diverse local involvement and effective collaboration; demonstration of measurable results; community outreach and education; and a comprehensive approach to watershed health.

The Montana Watershed Stewardship Award is sponsored by the Montana Watershed Coordination Council, a statewide information and support network that advances voluntary local watershed work and helps build the capacity to get it done.

For more information see:

<http://water.montana.edu/watersheds/default.htm>

## EPA Approves NPS Plan

The U.S. Environmental Protection Agency has approved Montana's **Nonpoint Source Management Plan**. The plan describes how the state will address water pollution from nonpoint sources over the next decade. Nonpoint sources are all sources of water pollution that aren't governed by point source discharge permits. These include diffuse, land extensive activities such as agriculture, forestry, and construction that contribute pollutants to rivers, lakes and streams via rainfall or snowmelt. Nonpoint source pollution also includes stream bed modifications, flow impairments, destruction of riparian habitat, abandoned and inactive mines and landfills, and individual septic systems that seep into surface waters.

The **Nonpoint Source Management Plan** is based on a *watershed approach* to protecting and restoring water quality. A watershed approach builds working partnerships with land and water users, local watershed groups, conservation districts, water quality districts, the Department of Environmental Quality and other state and federal resource agencies. Local watershed planning utilizes the knowledge and experience of ranchers, farmers, foresters, recreationists and public officials who understand the watershed and can craft a water quality plan that incorporates local economic and environmental concerns.

Montana relies on a nonregulatory approach to control nonpoint source pollution. Land managers and water users are encouraged to adopt a voluntary program of reasonable land, soil and water conservation practices that result in meeting water quality standards. A watershed approach focuses voluntary efforts to achieve quantifiable water quality results.

The NPS management plan incorporates DEQ's schedule for developing water quality restoration plans for every impaired water body by 2007. These plans will include Total Maximum Daily Loads (the total amount of pollutant a water body may receive from any source without violating water quality standards) and set targets for restoring water quality.

The NPS plan describes how water quality restoration plans will be implemented to restore beneficial uses to impaired rivers, lakes and streams. The plan calls for the creation of a "Montana Watershed Restoration Fund" that would increase financial support for conservation districts and watershed groups and provide funding for implementation activities such as irrigation infrastructure improvement and other best management practices.

EPA requires states to adopt long range nonpoint source management plans in order to receive certain Clean Water Act funds. Montana's Nonpoint Source Management Plan may be accessed at the department's website:

<http://www.deq.state.mt.us/index.html>

or a copy may be obtained by contacting

Jim Bauermeister (406) 444-6771

[jbauermeister@state.mt.us](mailto:jbauermeister@state.mt.us)



*Clark Fork Watershed Education Network field trip with Lolo seventh grade. A 319 project sponsored by Montana Natural History Center.*

## DEQ Announces 319 Grants

The Montana Department of Environmental Quality and U.S. Environmental Protection Agency have awarded '319' grants totaling \$1.8 million to 20 conservation districts, watershed groups and other agencies and organizations. "319" refers to the section of the Federal Clean Water Act that authorized the grant program. The 2001 projects are:

**Beaverhead River Watershed Project** sponsored by the Beaverhead County Community Forum—\$94,800 to begin TMDL development; initiate a baseline and monitoring project; complete

## Workshops

The Montana Department of Environmental Quality will be hosting three workshops to help applicants apply for and administer Section 319 Clean Water Act grants. These workshops will be:

**August 21 — 9:00 - 11:00 a.m.**

Great Falls Public Library  
301 2nd Ave N

**August 22 — 1:00 - 3:00 p.m.**

Missoula Public Library  
301 E Main

**August 23 — 1:00 - 3:00 p.m.**

Billings Public Library  
510 North Broadway

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Bitterroot River and several of its eastside tributaries, including Rye, Sleeping Child, Skalkaho, Burnt Fork and Three-Mile Creeks. The project will involve citizens in monitoring and evaluating water quality and land use issues in their area, building local knowledge and capability to address these issues through future watershed projects. Public education will build support for preventing non-point pollution and for restoring stream segments already affected, resulting in the formation of at least two watershed groups in the eastside tributaries by the conclusion of this project.

**Bobtail Creek Watershed Project** sponsored by Montana Watershed, Inc.—\$85,000 to develop a water quality restoration plan to address sedimentation, channel instability, hydrologic alterations, and fish passage. In addition to watershed planning, funds will restore portions of unstable channel and fund a watershed coordinator position.

**Bull River Watershed Project** sponsored by Green Mountain Conservation District—\$87,600 to maintain or restore water quality by reducing nonpoint pollution, stabilizing stream banks, improving stream habitat and restoring riparian vegetation in order to restore native fish populations and remove Trout Creek from the Montana impaired stream list [303(d)].

**Grave Creek Restoration** sponsored by Kootenai River Network—\$110,000 to restore 4,300 feet of Grave Creek and improve spawning and rearing habitat for bull trout and westslope cutthroat trout. The project is a continuation of an existing 319 grant project and is an integral part of a larger recovery plan that includes sediment reduction and channel stabilization on U.S. Forest Service land and private property.

two sediment reduction and habitat improvement demonstration projects on Stone Creek and Van Kamp Slough; and draft a watershed plan that includes Total Maximum Daily Loads (TMDLs) for pollutants.

### Big Hole Water Quality and Quantity Planning Proposal

sponsored by the Big Hole Watershed Committee—\$72,000 to mitigate the effects of low stream flows and lethal water temperatures for fisheries through a voluntary effort among agriculture, municipalities, business, conservation groups, anglers, and affected government agencies. The project will develop and submit 3 TMDL plans for the Big Hole watershed including the mainstem, Deep Creek, and one other impaired tributary. The project will support long-term monitoring and baseline data collection.

**Bitter Root Water Quality Education Project** sponsored by Bitterroot Resource Conservation Development Area—\$19,500 to educate residents about the water quality threats to the mainstem

**Groundwater Quality Assessment and Monitoring Plan** sponsored by the Flathead Basin Commission—\$100,000 to

1) Develop a master plan to assess and monitor groundwater quality; 2) Collect data to evaluate the nutrient concentrations in the shallow groundwater system and its impacts on Flathead Lake; 3) Evaluate health concerns in the shallow and deep groundwater systems; 4) Collect data to preserve and protect groundwater quality in the deep and shallow aquifer systems; 5) Evaluate data and make recommendations for future studies, actions, and infrastructure improvements that enhance groundwater quality; and 6) Begin discussions on integrating all water quality monitoring in the basin to address health and water quality concerns.



**Knox Ridge Project** sponsored by Fergus County Conservation District—\$132,277 to reduce erosion and sedimentation and improve riparian health and stability in Two Calf and Sourdough creeks by promoting the implementation of grazing Best Management Practices.

**Milk River Project** sponsored by Blaine County Conservation District—\$74,000 to 1) Complete a natural resource assessment to guide future watershed planning efforts; 2) Implement irrigation water management practices to improve natural resource conditions in the basin; and 3) Provide information and education to Milk River Basin residents.

**Montana Volunteer Water Monitoring Project** sponsored by Montana Watercourse—\$91,074 to increase public knowledge of the central role that scientific principles play in water quality assessment by providing training, equipment and support to individuals, school-based monitors and citizens groups. In addition, the project also seeks to educate watershed residents about Montana's TMDL process: what a TMDL is, why TMDLs are important, and the role communities may play in TMDL development.

**Middle Yellowstone Alluvial Valley Groundwater Project** sponsored by Yellowstone Conservation District—\$80,000 to collect data on the distribution, sources, and fate of nitrogen and salinity in ground and surface water, and to evaluate the water quality and hydrologic interrelationships of groundwater, irrigation, and drainage systems in the area. The data generated by this project will be used in the development of a comprehensive Yellowstone River Basin management plan.

**Lower Ten Mile Creek Watershed Protection Program** sponsored by Lewis & Clark Water Quality Protection District—\$87,044 to involve landowners, agencies, and interested stakeholders in scoping, planning and implementing projects that will

## 2002 SECTION 319 GRANTS

The Department of Environmental Quality has released application guidelines for Section 319 Clean Water Act grants for the 2002 fiscal year. Section 319 grants fund watershed, groundwater and information-education projects. In the coming year DEQ will give priority to the development of water quality restoration plans for rivers, lakes and streams on Montana's **303(d) List of Impaired Waterbodies**. A federal judicial order requires that water quality restoration plans be developed for every impaired waterbody in Montana by May 2007.

Grant applicants must be public agencies or private nonprofit organizations. Most "319" dollars go to conservation districts and local watershed groups for developing and implementing restoration plans. However, some statewide information-education projects are funded each year. Watershed project budgets must show at least twenty-five percent nonfederal match while groundwater and information-education projects require 40 percent match. The match can be either cash or in-kind contributions of goods and services. DEQ encourages applicants to create working partnerships with other agencies and organizations to promote widespread public involvement in the water quality restoration process.

Initial project proposals must be received by September 17. Proposals will be reviewed by a committee of the Montana Watershed Coordination Council that includes representatives of state and federal agencies, watershed groups, conservation districts and nonprofit organizations. Funds for successful projects should be available by May 2002.

A detailed guidance document and Request for Proposal may be obtained by contacting Petrina Horne at the Resource Protection Planning Bureau, phone (406) 444-2478 or e-mail [phorne@state.mt.us](mailto:phorne@state.mt.us).

increase streamflows, revegetate riparian areas and reduce nutrient loads.

**Rock Creek Watershed Project** sponsored by Green Mountain Conservation District—\$62,800 to maintain or restore water quality by reducing nonpoint pollution, stabilizing stream banks, improving stream habitat and riparian vegetation in order to restore native fish populations and remove Trout Creek from the Montana impaired stream list [303(d)].

**Governor's Upper Yellowstone River Task Force** sponsored by Park Conservation District—\$44,000 to 1) develop river corridor management recommendations that address potential cumulative effects of channel modification on water quality, riparian habitat, and flood plain extent, 2) educate the public, landowners, and regulators on management options, and the effect of those options on the long-term health of the river.

**Upper Gallatin Nonpoint Source Education Program** sponsored by the Montana University Water System—\$34,650 to 1) raise awareness of non-point sources of surface and groundwater pollution; 2) promote stewardship of the upper Gallatin River and its tributaries through recruitment and training of citizen volunteers to participate in a water quality monitoring program.

**Upper Shields Watershed Improvement Project** sponsored by Park Conservation District—\$135,025 to 1) Improve the health and condition of the Upper Shields Watershed; 2) Maintain or restore populations of Yellowstone Cutthroat Trout and other significant fish species; and 3) Optimize streamflows within the watershed to maximize benefits for fish, wildlife, and agriculture.

**Mid and Lower Yellowstone River TMDL Development** sponsored by Yellowstone River Conservation District Council—\$132,000 to 1) complete an analysis of the cumulative effects of river channel and habitat modification on water quality and 2) disseminate this information to local residents, conservation districts and other resource agencies.

**Teton River Basin Phase II** sponsored by Teton County Conservation District—\$100,000 to 1) finalize a TMDL and watershed plan for the Teton River; 2) improve water quality and quantity by rejuvenating the riparian corridor and improving farming; 3) continue an education and monitoring program that demonstrates benefits of all water uses including agriculture, drinking water, fisheries and recreation .

**Swan TMDL** sponsored by Lake County Conservation District—\$175,000 to 1) collect baseline data and fill data gaps that were identified during the development of the Draft Swan Watershed Plan; 2) develop TMDLs for seven impaired waterbodies in the watershed.

**Trout Creek Restoration** sponsored by Green Mountain Conservation District—\$112,000 to maintain or restore water quality by reducing nonpoint pollution, stabilizing stream banks, improving stream habitat and riparian vegetation in order to restore native fish populations and remove Trout Creek from the Montana impaired stream list [303(d)].

## TMDL News

Ron Steg has been promoted to supervisor of DEQ's Watershed Management Section. Steg will direct the six-year effort to develop water quality restoration plans/TMDL's for every polluted river, lake and stream in Montana. Ron has a bachelors degree in biology and a Masters in Water Resource Management from Duke University. At Duke, he studied under Ken Reckhow, the current Chair to the National Academy of Sciences *Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction*. He brings 18 years experience in both the public and private sector to his new position. He is a North American Lake Management Society Certified Lake Manager and a Society of Wetland Scientists Certified Professional Wetland Scientist. Prior to joining DEQ, Ron was the director of the ecological services division of a consulting firm focusing on lake and stream assessment and restoration.

Over the last couple of years, the TMDL program has become one of the most discussed, debated, and controversial environmental programs in the nation. Steg commented that resource agencies as well as the public have spent so much time dwelling on the details of the program (e.g., converting concentrations into pounds per day) and meeting court imposed schedules that we have lost the forest through the trees. The intent of the TMDL program is, and always has been, to restore water quality. Developing plans to restore water quality is nothing new to Steg who has been involved in water resource planning throughout the country.

According to Steg, the intent of the Montana TMDL program is to use the best available science to build Water Quality Restoration Plans that meet state and federal TMDL requirements. More importantly, however, Steg feels strongly that these plans are constructed such that they provide a service to landowners, watershed groups, and other resource agencies by characterizing water quality problems, setting water quality goals, and prioritizing alternative restoration measures. By bringing the best available science to bear and involving watershed stakeholders throughout the process, it is Steg's hope that TMDL's can be viewed as one of the first steps in restoring an impaired water body, rather than an arbitrary regulatory requirement.

Prior to his promotion to section supervisor Ron was the Watershed Coordinator for the Columbia basin. This area will now be managed by Dean Yashan, who served as Yellowstone Coordinator for one and a half years. DEQ veteran Carole Mackin

will continue as Lower Missouri River Basin Coordinator. The department is in the process of hiring four new watershed planners; two will fill vacancies in the Yellowstone and Upper Missouri Basin and two will begin to build the staff resource base in the TMDL program. Also, a Nonpoint Source Grant Coordinator position will be added in an effort to focus more direct attention on DEQ's grant programs.

Steg replaced Stuart Lehman who took a job with the Environmental Protection Agency in Washington, D.C.

## Bridging the Headgate

Federal, state, and local water agencies and organizations promote sustainable and efficient use of irrigation water through the "Bridging the Headgate" partnership. A "headgate" is the device that connects the farm to the local irrigation district or other water supplier.

According to Brent Esplin, of the U.S. Bureau of Reclamation's Montana office, Bridging the Headgate is a "conscious effort among agencies to work together for the benefit of the public as each agency attempts to fulfill their respective missions." The partnership encourages local irrigation and conservation districts, state water resource and conservation agencies and federal field offices to find innovative ways to address water conservation and related issues, including water quality, drought preparedness, wetland development, endangered species recovery, and watershed restoration.

Esplin cites the Buffalo Rapids project in eastern Montana as an example of Bridging the Headgate collaboration. The Bureau of Reclamation, Natural Resources Conservation Service and local conservation and irrigation districts are working together to improve irrigation efficiency by ten percent over five years. Achieving this goal will result in annual water savings of 29,000 acre feet. Project activities include replacing lateral ditches with buried and gated pipe and helping farmers reduce water use through improved irrigation management that includes converting 100 acres from flood to sprinkler irrigation, installing surge valves and utilizing AgriMet automated weather station data to schedule irrigation. The project also seeks to improve water quality by reducing soil erosion and nitrate loading.

In Montana, "Bridging the Headgate" will be incorporated into the structure of the Montana Watershed Coordination Council. Participation in the Bridging the Headgate Work Group will be open to anyone who has an interest in irrigation water manage-

ment issues. Esplin expects the Work Group to meet two to three times a year.

The "Bridging the Headgate" partnership was originally conceived in 1998 as a joint agreement among the U.S. Department of the Interior's Bureau of Reclamation, the National Association of Conservation Districts, the National Association of State Conservation Agencies, and the U.S. Department of Agriculture's Natural Resources Conservation Service. The purpose was to leverage the benefits of traditional "on-farm" and "off-farm" water conservation assistance throughout 17 western states. The National Water Resources Association, which represents local water districts, and Western States Water Council, which represents state water resource agencies, joined the partnership at the National Association of Conservation District's annual convention held in Fort Worth in February 2001.

Seventy cooperative projects have been initiated throughout the 17 western states since the original partnership was launched. A "Bridging the Headgate" workshop was held in Park City, Utah in July 2000 to celebrate successes to date and to invite the participation of the Western States Water Council and the National Water Resources Association.



***AgriMet is a network of automated agricultural weather stations operated by the Bureau of Reclamation. The 21 Montana AgriMet weather stations collect and transmit weather data used to model agricultural crop water use. AgriMet information includes precipitation, evaporation and transpiration, maximum and minimum temperatures, crop water use, wind speed and direction and humidity — everything an irrigator needs to know to use water resources effectively, efficiently and responsibly. The five western Montana AgriMet stations can be accessed at [www.pn.usbr.gov/agrimet](http://www.pn.usbr.gov/agrimet). The 16 stations east of the Continental Divide are at <http://www.gp.usbr.gov/agrimet/>***

## Source Water Funds Available

The Planning, Prevention and Assistance Division at DEQ is pleased to announce the availability of funds that can be used directly by a local government entity such as a conservation district, a non-profit organization such as a watershed group, or public water system to help complete source water delineation and assessment reports. These reports describe the source of water that reaches a public water system intake or well(s), identify potential contaminant sources, and assess the susceptibility of the drinking water to contamination. These reports can be completed by a geo-technical engineer, hydrologist, water quality specialist, or even a GIS specialist. Or, you can use these funds to subcontract with a consulting hydrogeologist or engineering firm.

Proposals to utilize this funding will be from 1) community or non-community non-transient public water systems; 2) local governments; or, 3) state or federal research entities or not-for-profit organizations. To qualify, the proposal should exhibit some or most of the following characteristics: high or moderate source water sensitivity, high number of water system users, resolve to develop a source water protection plan, intent to complete delineation and assessments for multiple PWSs under a single project. Proposals are scored based on criteria established by the Montana Source Water Protection Program and must meet a minimum score to qualify for funding. Once approved, a project is implemented through a contract between DEQ and the sponsoring entity.

The typical community PWS can receive up to \$3,000; the sponsor needs to contribute at least 40 percent of the project cost. This doesn't need to be a cash outlay; it can be an "in-kind" service such as the cost of staff time needed to support the project. If the project is to be completed by a sub-contractor, it may be necessary to solicit bids through a "request for proposal process" or RFP. Costs incurred completing the RFP can be counted as match.

Source water assessment reports for public drinking water systems can be a useful means to identify yet another stakeholder in the watershed. At the same time, the well-defined process also may be useful to watershed planners since it characterizes potential contaminant sources important to drinking water supplies that are also important to other water users. You can find a handful of example reports at <http://nris.state.mt.us/wis/swap/swapquery.asp>. Go to the box at the far right, activate the drop down menu, highlight "yes" and then click on "select."

Please contact Joe Meek, DEQ at (406) 444-4806 to find out how to put together a project proposal. He can provide you with a description of what is needed in a proposal and even include a sample format to follow.

## Conservation Districts' Role in the Watershed Planning/ TMDL Process

For more than sixty years conservation districts have been helping private land owners conserve and restore natural resources. Conservation districts were created to craft local solutions to resource management problems such as soil erosion and water pollution. Montana's 58 conservation districts cover the entire state and provide a way for citizens to participate in local resource planning. CDs are local government agencies governed by elected boards of supervisors. Districts are authorized, by state law, to develop comprehensive plans for the conservation of renewable resources.

Conservation districts work closely with the Natural Resources Conservation Service which provides technical assistance and material support. The Conservation Districts Bureau of the Montana Department of Natural Resources and Conservation offers technical and financial support. Districts also work with other state and federal agencies including the U.S. Forest Service, Bureau of Land Management, Bureau of Reclamation, Montana Fish, Wildlife and Parks and the Department of Environmental Quality.

## Resource Partnerships

The goal of Montana's nonpoint source management program is to restore and protect water quality through the voluntary implementation of best management practices identified in science based, community supported watershed plans.

The Department of Environmental Quality is coordinating a six-year effort to develop water quality restoration plans for every impaired water body in Montana. DEQ is using a watershed approach to expedite development and implementation of these plans.

A watershed approach focuses restoration efforts to achieve quantifiable water quality results. A watershed approach creates working partnerships with land and water users, local watershed groups, conservation districts, water quality districts, the Department of Environmental Quality and other state and federal resource agencies. Local involvement in watershed planning utilizes the knowledge and experience of ranchers, farmers,



foresters, recreationists and public officials who understand the watershed and can create a water quality restoration plan that incorporates local economic and environmental concerns.

Water quality restoration plans include *Total Maximum Daily Loads (TMDLs)* for pollutants that are causing impairment of beneficial uses. The plans will set targets for reducing pollutants to a level that meets water quality standards.

DEQ can share some of the responsibilities of TMDL development, but the department can not delegate its accountability. To merit public support (and EPA approval) water quality plans must be based on good science. The extent and effect of impairment must be documented, sources identified and a link established between targets and water quality standards.

DEQ has divided the state into 91 watershed planning areas and adopted a schedule for completing water quality plans for all areas by May 2007. The plans will include TMDLs and establish targets for all identified pollutants in all impaired water bodies in the watershed.

Developing a water quality restoration plan generally includes these basic steps:

1. Identifying and defining the problem: what is causing the pollution (*sediment, metals, nutrients, etc.*)?
2. Describing where the pollution is coming from including all point, nonpoint and natural sources of impairment.
3. Setting targets: What is the maximum load of pollutant that the water body can assimilate and still meet water quality standards? (*This calculation must account for seasonable variability and include a margin of safety.*)
4. Allocating load reductions among sources and identifying management practices that could attain water quality targets
5. Preparing a long-term monitoring strategy to measure success
6. Preparing an implementation strategy – defining the control measures that will be employed and how they will result in attaining the water quality targets.
7. Writing the water quality restoration plan (*i.e., a compilation of the above*).

In Montana, most water quality impairment comes from nonpoint sources such as rangeland, cropland, construction sites, logging operations, home septic systems, etc. Montana relies on a nonregulatory approach to control nonpoint source pollution.

Land managers and water users are encouraged to adopt a voluntary program of reasonable land, soil and water conservation practices that result in meeting water quality standards.

### Conservation District Role

The 1997 amendments to the Montana Water Quality Act encourage an active role for conservation districts in the TMDL process. Two CD supervisors, one from the counties east of continental divide and one from west of the divide, are included on the state TMDL advisory group.

DEQ is directed to consult with local conservation districts and watershed advisory groups on the 303(d) list of impaired waterbodies. DEQ is to schedule meetings with CDs and watershed groups to review and revise the 303(d) list prior to consulting with the statewide advisory group.

The department is to provide assistance and support to landowners, conservation districts and watershed advisory groups for interim measures that may restore water quality and remove the need for a TMDL.

The law requires DEQ to consult with conservation districts and watershed advisory groups prior to and during the development of TMDLs. State law envisions the local watershed advisory group providing advice to DEQ and the conservation district.

Conservation districts can select their level of involvement in the TMDL process based on their financial and technical resources and local interest and sentiment. Some districts will be content in an advisory role to DEQ, while other districts will want to be proactively involved in all aspects of the planning process.

Conservation districts can build community support for water quality plans and promote and help implement BMPs. Conservation districts can play an invaluable role in helping to organize local watershed advisory groups. CD supervisors and staff know who the local conservation leaders are. They know who can speak for the various land and water users. CD involvement facilitates citizen involvement in the watershed planning process. Local people know what the conservation district does and where it is located. District involvement gives credibility to the watershed planning process.

Conservation districts often act as the fiscal and administrative agent for local watershed groups. Many districts sponsor watershed restoration or information/education projects.

Districts have the structure, standing and established track records to successfully apply for public and private grants. A conservation district is in a good position to leverage and integrate various state and federal programs such as USDA's Environmental Quality Incentive Program (EQIP), Fish, Wildlife and Parks Future Fisheries, DEQ/EPA's Section 319 grants, the State Revolving Loan Fund (SRF), etc.

CDs can be particularly helpful in identifying BMPs to achieve water quality targets. The Water Quality Act directs DEQ to consider the "environmental, economic, and social costs and benefits of developing and implementing a TMDL." District supervisors and staff know which management practices are economically feasible and socially acceptable in their communities. Water quality restoration plans that are developed with grassroots support are generally practical, cost-effective, less burdensome to local business, industry and landowners, and more likely to be implemented.

### **How will a Water Quality Restoration Plan/TMDL be Useful to a CD?**

A water quality plan enables CDs and their resource partners to evaluate and document progress. A plan focuses efforts and resources where they can have the most impact. A watershed plan helps districts integrate its various resource programs to reap multiple benefits. For example, wildlife habitat or rangeland restoration projects also have water quality benefits. A water

quality plan can help districts access resources. Many state and federal agencies are moving toward funding projects on a watershed basis. A watershed plan shows funders that the district or watershed group has measurable goals and objectives.

Although the legislature assigned DEQ the primary role for developing TMDL plans, protecting and restoring water quality is every agency's—and citizen's—responsibility. Collaborating in the development of water quality restoration plans is an extension of the districts' historic function to facilitate local conservation planning and find local, voluntary solutions to resource problems.

For more information on the TMDL/Water Quality Restoration process contact the DEQ Watershed Management Section:

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